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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,149	03/10/2004	Katsunori Komori	10873.1419US01	5537
7590 02/29/2008 HAMER SCHUMANN, MUELLER & LARSON, P.C. P.O. BOX 2902-0902 MINNEAPOLIS, MN 55402				
EXAMINER MARTIN, ANGELA J				
ART UNIT 1795		PAPER NUMBER		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/798,149

**Applicant(s)**

KOMORI ET AL.

**Examiner**

ANGELA J. MARTIN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This Office Action is responsive to the Amendment filed on November 13, 2007. The Applicant has amended claim 1. Applicant's arguments, see pp. 5-6, filed 11/13/07, with respect to the rejection(s) of claim(s) 1-13 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made for the following reasons of record.

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-7, 10, 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Komori et al., U.S. Pat. Application Pub. 2004/0137320.

The applied reference has common inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the

reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Komori et al., teach a nickel metal hydride storage battery, comprising: a battery case; and a group of electrode plates arranged in the battery case, wherein the battery case comprises a battery case main body having a hole and a lid for closing the hole; the battery case comprises a first portion made of a metal or a laminate of a metal and a resin, and a second portion made of a resin (0054; 0018-0019); and an area of the first portion is 20% or more and 90% or less with respect to the entire battery case (0050; Fig. 4). The nickel metal hydride storage battery according to claim 1, wherein the battery case main body comprises a resin case and a multilayered film formed on a part of the surface of the resin case (0040); the multilayered film comprises a metal layer and two resin layers arranged in a manner in which the metal layer is interposed between the two resin layers; and a portion on which the multilayered film is formed is the first part (0051; Fig. 6). The nickel metal hydride storage battery according to claim 1, wherein the average thickness of the second portion is 0.7 mm or more and 2.5 mm or less (0051). The nickel metal hydride storage battery according to claim 1, wherein the hydrogen permeability coefficient at 40.degree. C. of the resin forming the second portion is  $2 \times 10^{-15}$  mol.multidot.m/m.sup.2.m- ultidot.sec.multidot.Pa or more and  $1 \times 10^{-14}$  mol.multidot.m/m.sup.2.multidot.sec.multidot.Pa or less (Table 1). The nickel metal hydride storage battery according to claim 1, wherein the average value of the hydrogen permeability at 40.degree. C. of the second portion is  $1.4 \times 10^{-18}$  mol/m.sup.2.multidot.sec.multidot.- Pa or more and

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2.5.times.10.sup.-17 mol /m.sup.2.multidot.sec.multidot.Pa or less (Table 1). The nickel metal hydride storage battery according to claim 1, wherein the group of electrode plates comprise a negative electrode comprising a hydrogen absorbing alloy as a main component; and the hydrogen absorbing has an equilibrium hydrogen desorption pressure at 45.degree. C. of 0.02 MPa or more and 0.1 MPa or less (Table 1).

The nickel metal hydride storage battery according to claim 1, wherein the second portion comprises a polymer alloy of polypropylene and polyphenylene ether (claim 3).

The nickel metal hydride storage battery according to claim 1, wherein the entire battery case main body is the first portion and the lid is the second portion (0033, 0034, 0041).

The nickel metal hydride storage battery according to claim 1, wherein the capacity of the nickel metal hydride storage battery is in the range from 4 Ah to 10 Ah (0058).

Thus, the claims are anticipated.

### ***Claim Rejections - 35 USC § 102/103***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-13 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Soda, JP 2004022454 (machine translation).

Soda teaches a nickel metal hydride storage battery, comprising: a battery case; and a group of electrode plates arranged in the battery case, wherein the battery case comprises a battery case main body having a hole and a lid for closing the hole; the battery case comprises a first portion made of a metal or a laminate of a metal and a resin, and a second portion made of a resin (abstract; Fig. 1). The nickel metal hydride storage battery according to claim 1, wherein the battery case main body comprises a resin case and a multilayered film formed on a part of the surface of the resin case (0025; Fig. 2); the multilayered film comprises a metal layer and two resin layers arranged in a manner in which the metal layer is interposed between the two resin layers; and a portion on which the multilayered film is formed is the first part (0025; Fig. 2). The nickel metal hydride storage battery according to claim 1, wherein the average thickness of the second portion is 0.7 mm or more and 2.5 mm or less (0039-0040). The nickel metal hydride storage battery according to claim 1, wherein the hydrogen permeability coefficient at 40.degree. C. of the resin forming the second portion is  $2 \times 10^{-15}$  mol.multidot.m/m.sup.2.multidot.sec.multidot.Pa or more and  $1 \times 10^{-14}$  mol.multidot.m/m.sup.2.multidot.sec.multidot.Pa or less (Tables 1 and 2). The nickel metal hydride storage battery according to claim 1, wherein the

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average value of the hydrogen permeability at 40.degree. C. of the second portion is 1.4.times.10.sup.-18 mol/m.sup.2.multidot.sec.multidot.- Pa or more and 2.5.times.10.sup.-17 mol /m.sup.2.multidot.sec.multidot.Pa or less (Tables 1 and 2) The nickel metal hydride storage battery according to claim 1, wherein the battery case main body is formed of a Ni-plated steel sheet (claim 3).The nickel metal hydride storage battery according to claim 1, wherein the second portion comprises a polymer alloy of polypropylene and polyphenylene ether (claim 7).

Thus, the claims are anticipated.

However, if the claims are not anticipated, in the alternative they are obvious over the prior art of record because since the same materials are disclosed, the same hydrogen desorption pressure and the same capacity would be present in the battery. Regarding the area of the first portion with respect to the area of the battery case, "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."; *In re Hoeschele*, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969). A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Murata, JP 05021045 A, teach a metal hydride battery, comprising container made of resin and metal layers. Toyouchi et al., JP 09259840, teach a battery container formed of an alloy resin.

***Response to Arguments***

6. Applicant's arguments with respect to above claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANGELA J. MARTIN whose telephone number is (571)272-1288. The examiner can normally be reached on Monday-Friday from 10:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJM

/Angela J. Martin/  
Examiner, Art Unit 1795

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